

CLAIMS:

1. An optical disk drive, comprising:
a housing (1);
a drive motor (2) and a drive shaft (3) mounted within the housing and adapted to engage the disk (D) for rotating it,
5 an optical pick-up unit (5), including a fixed part (7) comprising at least a light source, and a movable part (8) with sliding mounted possibility on a guide (9) and comprising at least a mirror (13), a focusing lens (14), and lens-moving elements, said movable part being adapted to move a focused beam along the disk (D),
a PCB (17) having a signal connection to the lens-moving elements on the
10 movable part (8) of the pick-up unit through flexible wires (20),
characterized in that
only one PCB (17) is provided which serves as a mounting base for the fixed part (7) of the optical pick-up unit (5), the guide (9), and the drive motor (2).
- 15 2. The optical disk drive as claimed in claim 1, wherein the PCB (17) accommodates electronic components (18) which are mounted to the PCB (17) on a side thereof facing an adjacent housing wall.
3. The optical disk drive as claimed in claim 1 or 2, wherein the PCB (17) is
20 mounted to the housing through heat-conducting mounting means, such as a heat-conducting mat (19).
4. The optical disk drive as claimed in claim 1, wherein the flexible wires are contained within a wire flex (20) which is bendable about one bending axis only, said
25 bending axis being substantially parallel to the shaft (3) of the drive motor (2).
5. The optical disk drive as claimed in any of the preceding claims, wherein the linear guide (9) for the movable part (8) of the optical pick-up unit (5) is mounted directly on the PCB (17).

6. The optical disk drive as claimed in any of the preceding claims, wherein the housing (1) is made of metal.

5 7. The optical disk drive as claimed in any of the preceding claims, wherein the movable part (8) of the pick-up unit (5) comprises an actuator having driving coils for the focusing lens, said driving coils being connected to the PCB through said flexible wires (2).

8. A method of assembling an optical disk drive, comprising the steps of:

10 providing a housing (1), a drive motor (2), and a drive shaft (3) to be mounted within the housing and adapted to engage the disk (D) for rotating it, an optical pick-up unit (5), comprising a light source, at least a mirror (13) and a focusing lens (14) to create a focused beam, a guide (9) for moving the focused beam along the disk, and a PCB (17) having main electrical components (18) and being connected to the guide (9) through flexible
15 wires (20),
characterized in that

first the main electrical components (18) are mounted on one side of the PCB (17), and then the guide (9), the pick-up unit (5), and the drive motor (2) are mounted on the opposite side of the PCB (17).

20 9. The method as claimed in claim 8, wherein the parts (2, 5, 9) and electrical components (18) are fixed to the PCB (17) in one soldering step.